

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Cancelled)

2. (Currently Amended) ~~The holographic~~ A holographic recording method according to ~~claim 1, wherein comprising:~~

splitting a laser beam from a laser beam source into an object beam and a reference beam;

modulating an intensity of the object beam according to information to be recorded;

modulating an incident angle of the reference beam onto a holographic recording medium; and

projecting each of the object beam and the reference beam onto the holographic recording medium to thereby form interference fringes,

wherein a beam shape of the reference beam is an elongated shape having a minor axis in a plane containing incident optical axes of the reference beam for the respective incident angles and having a major axis in a plane orthogonal to the plane, and

the major axis of the elongated beam shape of the reference beam is coincident with an outer diameter of a beam shape of the object beam.

3. (Currently Amended) The holographic recording method according to ~~claim 1, claim 2,~~ wherein

the beam shape of the reference beam is one of an elliptical shape and a rectangular shape.

4. (Currently Amended) The holographic recording method according to ~~claim 1, claim 2,~~ wherein

a ratio between the minor axis and the major axis of the elongated shape is 2:3 to 3:8.

5. (Original) The holographic recording method according to claim 3, wherein a ratio between the minor axis and the major axis of the elongated shape is 2:3 to 3:8.

6. (Currently Amended) A holographic recording apparatus, comprising:

a laser beam source;

a beam splitter which splits a laser beam emitted from ~~this~~the laser beam source into an object beam and a reference beam;

an object optical system which guides the object beam split by ~~this~~the beam splitter to a holographic recording medium; and

a reference optical system which guides the reference beam to the holographic recording medium,

~~wherein~~wherein the reference optical system is configured to include:

a beam shaping optical system which transforms a beam shape of the reference beam into an elongated shape; and

an angle modulator which guides the reference beam having the beam shape transformed into the elongated shape by ~~this~~the beam shaping optical system to the holographic recording medium with an incident angle modulated, which are arranged in this order from the side of the beam splitter;

the object optical system is configured to include:

a spatial light modulator which modulates an intensity of the object beam according to information to be recorded; and

a Fourier lens, which are arranged in this order from the side of the beam splitter; and

the beam shaping optical system is configured such that a minor axis of the elongated shape is coincident with an angle multiplex direction by means of the angle ~~modulator~~modulator, and

a major axis of the elongated shape of the reference beam is coincident with an outer diameter of a beam shape of the object beam.

7. (Original) The holographic recording apparatus according to claim 6, wherein the beam shaping optical system comprises at least one cylindrical lens which narrows the beam shape of the reference beam in a direction of the minor axis.

8. (Previously Presented) The holographic recording apparatus according to claim 6, wherein

the beam shaping optical system is configured to transform the beam shape of the reference beam into one of an elliptical shape and a rectangular shape.

9-13. (Canceled)

14. (Currently Amended) A holographic recording and reproducing apparatus comprising:

a laser beam source;

a beam splitter which splits a laser beam emitted from this laser beam source into an object beam and a reference beam;

an object optical system which guides the object beam split by this beam splitter to a holographic recording medium;

a reference optical system which guides the reference beam to the holographic recording medium;

an address detector which is arranged on a line extending an optical axis of the reference beam having passed through the holographic recording medium; and

a two-dimensional photodetector which is arranged on a line extending an optical axis of the object beam having passed through the holographic recording medium,

wherein wherein the reference optical system is configured to include:

a beam shaping optical system which transforms a beam shape of the reference beam into an elongated shape; and

an angle modulator which guides the reference beam having the beam shape transformed into the elongated shape by this beam shaping optical system to the holographic recording medium with an incident angle modulated, which are arranged in this order from the side of the beam splitter;

the object optical system is configured to include:

a spatial light modulator which modulates an intensity of the object beam according to information to be recorded; and

a Fourier lens, which are arranged in this order from the side of the beam splitter;

the beam shaping optical system is configured such that a minor axis of the elongated shape is coincident with an angle multiplex direction by means of the angle modulator; and

a distance of the address detector from the holographic recording medium is set such that beam spots on lines extending the reference beam having passed through the holographic recording medium for respective incident angles are adjacent to each other with a spacing therebetween on a light receiving surface.

15. (Original) The holographic recording and reproducing apparatus according to claim 14, wherein

the major axis of the elongated shape of the reference beam is coincident with an outer diameter of a beam shape of the object beam.

16. (Previously Presented) The holographic recording and reproducing apparatus according to claim 14, wherein

the beam shaping optical system transforms the beam shape of the reference beam into one of an elliptical shape and a rectangular shape.

17. (Previously Presented) The holographic recording and reproducing apparatus according to claim 14, wherein

the beam shaping optical system comprises at least one cylindrical lens which narrows the beam shape of the reference beam in a direction of the minor axis.

18. (Original) The holographic recording and reproducing apparatus according to claim 16, wherein

the beam shaping optical system comprises at least one cylindrical lens which narrows the beam shape of the reference beam in a direction of the minor axis.

19-22. (Canceled)

23. (Previously Presented) The holographic recording and reproducing apparatus according to claim 15, wherein

the beam shaping optical system transforms the beam shape of the reference beam into one of an elliptical shape and a rectangular shape.

24. (Previously Presented) The holographic recording and reproducing apparatus according to claim 15, wherein

the beam shaping optical system comprises at least one cylindrical lens which narrows the beam shape of the reference beam in a direction of the minor axis.